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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/920,924 | 08/02/2001 | Harry C. Sweere | 44374.5.1 | 7164 |

22859 7590 08/13/2003

INTELLECTUAL PROPERTY GROUP
FREDRIKSON & BYRON, P.A.
4000 PILLSBURY CENTER
200 SOUTH SIXTH STREET
MINNEAPOLIS, MN 55402

[REDACTED] EXAMINER

BAXTER, GWENDOLYN WRENN

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

3632

DATE MAILED: 08/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------|---------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/920,924 | SWEERE ET AL. | |
| Examiner | Art Unit | | |
| Gwendolyn Baxter | 3632 | | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 19 May 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-25 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-5, 7 and 9-25 is/are rejected.

7) Claim(s) 6 and 8 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

| | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

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This is the second office action for serial number 09/920,924, Methods and Apparatus for Generating Force and Torque, filed on August 2, 2001. This application is a continuation in part of 09/724,494 filed November 28, 2000.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1-5, 7, and 9-25 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,246,191 to Moss. Moss teaches an apparatus comprising a cam (22), a cam following assembly (23, 25) and a spring (24). The cam has a first guiding surface (20), a second guiding surface (21) and a longitudinal axis (defined between the first and second guiding surfaces). The cam following assembly includes a first roller (23) and a second roller (23). A first following surface engages the first guiding surface of the cam at least at a first contact point. The second roller has a second following surface engaging the second guiding surface of the cam. The spring has a first end coupled to the first roller and the second end coupled to the second roller. The first roller has a contact angle defined by a first imaginary line and an imaginary reference line extending between the central axis of the first roller and a central axis of the second roller. The

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cam following assembly is movable along the longitudinal axis between a first position and a second position. The spring has a first deflection when the cam following assembly is in the first position and a second deflection when the cam following assembly is in the second position. The first roller has a first contact angle when the cam following assembly is in the first position and a second contact angle when the cam following assembly is in the second position. The first contact angle is different from the second contact angle. The first deflection is different from the second deflection by nature of the shape of the cam. Therefore as the roller rolls along the cam surface the deflection of the second is greater than the deflection of the first making the angle of contact of the second contact angle smaller than the first contact angle. Since the angle of deflection is greater than the first angle of deflection, therefore the tan function of the second contact angle is smaller than the tan function of the first contact angle and the ratio of the first deflection to the second deflection is equal to the second ration of the tan function of the first contact angle to the tan function of the second contact angle.

Allowable Subject Matter

Claims 6 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Response to Arguments

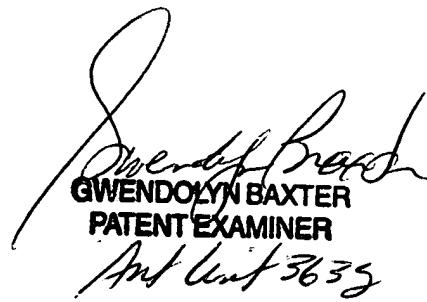
Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gwendolyn Baxter whose telephone number is (703) 308-0702. The examiner can normally be reached Monday-Friday from 8:30 A.M. to 5:00 P.M. Eastern Time Zone.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1113. The fax phone number for this Group is (703) 305-3597.

gb
July 25, 2003


GWENDOLYN BAXTER
PATENT EXAMINER
Art Unit 3632